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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/729,332 | 12/05/2003 | Joseph Kwak | I-2-0453.1US | 1134 |
| 24374 7590 03/30/2007 VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103 | | | EXAMINER NGUYEN, SIMON | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2618 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 03/30/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/729,332

Applicant(s)

KWAK ET AL.

Examiner

SIMON D. NGUYEN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44, 46, 49-53, 55 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 45, 47-48, 54, 56-57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 44, 46, 49, 52-53, 55, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCune, Jr. (6,850,736) in view of Cutcher et al. (20040203403).

Regarding claim 44, McCune, Jr. discloses a method for determining a received signal strength (abstract), comprising: determining a signal level of a carrier frequency (signal strength); determining S/N and interference histogram (predetermined noise level); deriving the parameter representing a S/N and interference value (abstract, (column 3 lines 1-45, figs.4-9, column 9 line 40 to column 10 line 10). However, McCune does not specifically disclose obtain the RSSI value at an antenna connector.

Cutcher discloses a RSSI (a first value) measured at an antenna connector (paragraphs 4,16), wherein the RSSI level is the sum of both a desired signal power and an interference power (paragraph 5). The RSSI measurement then compares to one predetermined interference threshold value T1, T2, T3 (as noise and interference histogram) (considering as a second value) to determine what state the transceiver's attenuator is set (as the step of deriving the parameter) (abstract, figs. 1-2, paragraphs

Art Unit: 2618

4-5, 16-21). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have McCune, modified by Cutcher to measure the RSSI at the antenna in order to determine if an input signal should be attenuated.

Regarding claim 53, this claim is rejected for the same reason as set forth in claim 1 as apparatus of method claim 1.

Regarding claims 46, 55, McCune further discloses the parameter is a logarithmically scaled value of the signal to noise plus interference value (figs. 1, 5, 7).

Regarding claims 49, 52, 58, Cutcher discloses the parameter represents the S/N at the antenna connector or other different points (paragraph 16).

3. Claims 50-51, 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCune, Jr. (6,850,736) in view of Cutcher et al. (20040203403) as applied to claim 44, and further in view of Runzo (2003/0022645).

Regarding claims 50-51, 59-60, the modified McCune fails to teach measuring the RSS after a RF down conversion, and after post processing.

Runzo further discloses the signal strength is measured after a RF/ down converter and after post processing (at an IF detector 94)(paragraph 42, fig.3).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified McCune, modified by Runzo to measure the RSS at different locations, which will improve in determining how good a received signal.

Allowable Subject Matter

4. Claims 45, 47-48, 54, 56-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 45, 54, the prior art of record fails to teach or suggest a received power indicator histogram.

Regarding claims 47-48, 56-57, the prior art of record fails to teach or suggest the parameter representing a signal to noise plus interference value is an 8-bit unsigned value.

Response to Arguments

5. Applicant's arguments related to claims 44, 46, 53, 54 filed 1/23/07 have been fully considered but they are not persuasive.

The applicant, in Remarks, stated that the prior art issued to McCune and Cutcher fails to teach: **a) the total received radio frequency energy** (independent claims 44, 53) and **b) a logarithmically scaled value of the signal to noise plus interference value** (dependent claims 46, 55).

As of independent claims 44 and 53, Cutcher discloses the receiver measuring the received signal strength at the antenna, wherein the RSSI level is the sum of both the desired signal power and the interference power (paragraphs 4-5).

Art Unit: 2618

As of dependent claims 46, 55, McCune discloses the parameter is a logarithmically scaled value of the signal to noise plus interference value (figs.1, 5, 7).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Knox building,

501 Dulany, Alexandria, VA.

Simon Nguyen

March 21, 2007



**SIMON NGUYEN
PRIMARY EXAMINER**